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Rein, M. and Friedman, B.L.

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Working Paper

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WP-95-010
February 1995

IIASA International Institute for Applied Systems Analysis • A-2361 Laxenburg • Austria
Telephone: +43 2236 807 • Telefax: +43 2236 71313 • E-Mail: info@iiasa.ac.at

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Enterprise Social Benefits and the Economic Transition in Hungary

Martin Rein[*]
Barry L. Friedman[**]

In Hungary as in other East Bloc countries, enterprises have given a variety of non-wage benefits to their workers, sometimes called the "social wage." We explore what has happened to non-wage compensation during the economic transition which began in 1989. During this period, the real wage has fallen, and many aspects of enterprise operations have undergone change. This paper considers three broad questions. (1) How has total compensation and its composition changed during this period of restructuring? Have changes in non-wage compensation offset or reinforced changes in wages and which elements have been increasing, which decreasing? (2) What factors can account for the change? (3) Have enterprise non-wage benefits in fact served social functions in addition to their business functions, and, if so, has the social role of benefits changed during this period? This paper offers an exploratory investigation of these questions.

We have assembled several sources of data on non-wage compensation in Hungary. The data are generally aggregative. We supplemented these with six case studies of individual enterprises.[1] These data are not sufficient for a rigorous investigation of our questions, but they help suggest aspects of these issues. Moreover, they help identify complications relevant to a full analysis and the data that would be required to deal with them. The paper is basically an initial exploration of the available data and of a framework that could help analyze it.

We first suggest a framework for thinking about the determinants of non-wage compensation and its possible social functions. Then, we use our framework to explore our questions using the various data sources. Finally, we consider the requirements for a more complete analysis.

I. Framework for Analysis

A. The Determinants of Non-Wage Compensation

The primary actors whose behavior determine non-wage compensation are employers, workers, and government. A current textbook approach to benefits and wages comes from hedonic wage theory which provides an equilibrium analysis of the behavior of employers and workers.[2] This model can help with our question concerning the determinants of benefits, although it also has some limitations in the context of economic transition in Hungary. It is

[*] Professor, Department of Urban Studies and Planning, MIT, Cambridge, Massachusetts.
[**] Human Services Research Professor, Heller School, Brandeis University, Waltham, Massachusetts.

particularly useful in explaining benefits intended to attract and retain workers. It can deal with the transition issue on a comparative static basis, predicting the changes in equilibrium wages and benefits resulting from changing exogenous factors. However, the transition has also affected benefits in a way not predicted by the model. One aspect of the disequilibrium in Hungary has been the shedding workers. In fact, benefits have been used extensively to facilitate this process. We will consider first the hedonic wage model, highlighting the insights it offers, and then turning to other factors which can supplement it in explaining the determinants of benefits during the period of transition.

To sketch briefly the hedonic wage model, employers have a trade-off between wages and benefits which will keep profits constant at a competitive level (along an iso-profit curve). For workers there is also a trade-off reflecting relative preferences for wages and benefits and represented by indifference curves. Each employer would like to choose a particular wage-benefit combination which is expected to appeal to (maximize the utility of) the kinds of workers that the employer would like to attract. For the market as a whole, the employer iso-profit curves can be aggregated into an offer curve showing all available combinations of wages and benefits. Each worker pursues a point on the offer curve that will maximize utility by seeking a job from an employer offering a wage-benefit combination at or near the preferred point. Employers and workers may have to adjust their offers until the market clears. Government is not an explicit actor in this model, but its actions may affect both the iso-profit curves of employers and the trade-offs available to workers. For example, a tax or subsidy can change the terms of the trade-off between wages and benefits to the employer. A mandate can restrict employers to a particular wage-benefit combination, limiting their ability to attract the kinds of workers they want.

This simple model helps identify a number of factors that might lead to changes in non-wage compensation. Any factor that affects enterprise iso-profit curves or worker indifference curves could affect it. On the enterprise side, cost factors, demand variables, and aspects of government regulation could affect the shape and position of the iso-profit curve. Consider first the cost factors that could change the cost of benefits relative to wages. Certainly government can influence the cost of benefits. For example, tax subsidies could reduce the net cost of particular benefits. Or, changes in regulations could permit enterprises to provide the same kind of benefit, but in a cheaper way. The government has been permitting a shift from in-kind to more cash-like forms of delivery for some types of benefits, perhaps reducing their cost to enterprises. In particular, enterprises have been trying to give up the infrastructure used to support some of the old forms of benefits, perhaps also reducing the cost of delivery.

The demand side of an enterprise's market may also affect the iso-profit curve. The model assumes that profits are at the competitive equilibrium level. A change in demand for the output of the enterprise could displace profits from this level, requiring new adjustments to restore equilibrium. The enterprise could shed workers or cut non-labor costs. But it may also decide to cut compensation per worker, some combination of wages and benefits. If it does, the result would be a shift in the iso-profit curve. Thus, shedding workers is an alternative (or supplement) to shifting the iso-profit curve for an enterprise out of equilibrium.

It is often asserted that enterprises in the socialist economy had soft budget constraints. If budget constraints have been tightened during the transition period, this could have an effect which is in part similar to a fall in demand, causing firms to cut costs, one option being a shift in the iso-profit curve. However, the existence of soft budget constraints adds a possible complication. The iso-profit curve might not be well-defined in the presence of a soft budget constraint. An enterprise might be able to move off its iso-profit curve if it

could somehow be subsidized. Some enterprises may have been able to avoid the negative trade-off between wages and non-wage benefits altogether through subsidies. Assuming that wages could be monitored more closely than benefits, this might have resulted in more generous benefit packages from the enterprises successful in arranging subsidies. However, if budget constraints have tightened during the period of transition, the iso-profit curves should have become more clearly negative, controlling for factors such as the quality of the workers and the demands of the job. For the U.S., the few statistical studies have supported the idea of a negative relationship between wages and benefits.[3]

One important feature of the model is that it allows enterprises to choose different packages of wages and benefits based on what they consider useful in attracting and keeping the kinds of workers they want. Government policy may have contributed to an increase in the variability across enterprises. In particular, the removal of government mandates could produce such a change. To simplify the issue, suppose that in the socialist system, the government mandated all benefits. In this pre-reform setting, we would expect a high degree of uniformity in benefit packages across enterprises. Suppose then that the reform government rescinded its mandate. Left on their own, some enterprises would drop the benefits (or some of them) while others might find them valuable in attracting or keeping suitable workers. In other words, we would expect increasing variability across enterprises in benefit packages during the period of reform.

In fact, government policy in Hungary has been more complicated. While old rules and expectations have dwindled, the government has actually introduced some new mandates during the reform period. But increased variability still is a possibility. First, in some benefit areas there may, indeed, be less regulation. Second, the government may not enforce its mandates or do so only selectively. Third, some new government initiatives are in the same areas as old benefits, but allow enterprises more flexibility on how the benefits are delivered. As already indicated, some of the new regulations still try to encourage particular benefits, but allow enterprises more flexibility in the way they are delivered. Although variability may be expected in any case, the changing government policies could increase it across enterprises, either in kinds of benefits or, for a given kind, in the form of delivery.

On the worker side, changes in consumer needs or tastes could change indifference curves. Any of these factors could change the equilibrium in ways that would induce employers to redesign their benefit packages.

Considering limitations of the model, it was not designed to explain a situation of disequilibrium. However, as suggested above, aspects of the disequilibrium such as the shedding of workers can be related to the model. The feature not accounted for is the use of benefits to facilitate the shedding. However, government policy plays an important role in these benefits since it has in effect raised the price of shedding by requiring certain benefits. While it may be possible to incorporate this phenomenon into the model, we will deal with it separately in our discussion of the social functions of benefits.

As one further limitation, the hedonic wage model treats government actions as exogenous and then predicts the reactions of enterprises and workers. In fact, however, government policy is also reactive. Government not only has its intentions which may change for exogenous reasons, but it also reacts to the behavior of enterprises, at least when it discovers what this behavior is. Over the long run, this may result in cycles of action and reaction in policy. This paper, however, is concerned primarily with the transition in Hungary since 1989. This period has probably been too short for complicated cycles.

Our aggregate and case data sources do not permit a statistical test of the contributions of specific factors to the change in non-wage compensation. Rather, the discussion suggests issues to consider in our preliminary exploration of Hungarian data. On the outcome side, we should look for changes in the mix of benefits and the forms in which they are delivered as well as for signs of increased variability in these across enterprises. Concerning determinants of change, these may include the mandates, tax incentives, and regulations of government as well as reactions by government to changes in enterprise behavior; the cost of benefits to enterprises and the rights of enterprises to control cost items such as infrastructure; the needs or tastes of workers; disequilibrium pressures such as those leading to the shedding of workers and its implications for benefits.

B. The Social Function Of Non-Wage Compensation

In the discussion of the determinants of benefits based on the hedonic wage model, government policies played a central role, but our discussion treated them as exogenous. Government, however, is one of the main interpreters of what is social, and its actions are likely to change as thinking about social responsibilities change. It is beyond the scope of this paper to explore the mind of policy makers, and there may not be a unified view on social needs and standards. Our concern is with what is done rather than what is said. We will examine benefits that could fit several possible social rationales. In particular, we will look for benefits that are a form of social protection, those that involve the delivery of social services, commodity benefits, and benefits that do not fit any of these categories. Enterprise involvement is changing in each of these areas in directions that give insights into the concerns driving policy.

The social rationale for commodity subsidies is perhaps the least clear, but in view of their extensive use, we allow the possibility that countries might consider them social. As one possible rationale, in the socialist economy fixed prices created shortages in which some goods were not available at all in markets and others were in chronically short supply. Enterprise commodity benefits could serve the social function of making goods available. Enterprises were generally not the sole source of a commodity, but provided a convenient supplement to what could be purchased in stores. With the opening of markets, it might be expected that the need for commodity benefits from enterprises would diminish. On the other hand, the period of transition in Hungary has become one of rapid inflation. While markets may be working, not all people can keep up with the price increases. The government might decide to offer commodity subsidies once more to protect people against the uncertain consequences of inflation (even though the hedonic wage theory of benefits suggests that if real benefits go up, real wages may go down). Since these two tendencies work in opposite directions, we may be able to observe only the net outcome — that is, the extent of commodity benefits.

Turning to the role of enterprises in social services, in the socialist era, enterprises were responsible for a range of social services such as kindergartens and nurseries which might be provided by other agencies in other countries. Sometimes these services were limited to employees of the firm. In other cases, they were available to the whole community, in line with the view that the enterprise was a social entity. "The enterprises were not regarded as mere producers of goods ... but rather a place where people were brought together to participate in the process of socialization and to create a 'new man.'[4] If this view should recede with the progress of reform, enterprise obligations may also diminish.

Finally, enterprise benefits may include some that are forms of social protection. Social protection benefits tend to share the common feature that they protect people against risks of income loss. Of course, the fact of income loss on its own is not sufficient to establish the social need for protection. There are many cases of income loss for which countries offer no protection. Generally, the feature distinguishing income losses deserving social protection is that there is some form of market failure — generally an insurance problem. There may also be a distribution problem. While government programs are one way to provide social protection, many countries also rely on enterprises to perform similar functions in areas such as pensions, disability insurance and health insurance.

We will examine the extent to which enterprise benefits in Hungary serve a social protection function. There are reasons to expect increases in the extent of social protection in enterprises during the period of transition. First, in the process of restructuring, enterprises have sought ways to shed workers, but this has resulted in an increase in some forms of enterprise social protection. Enterprises might have tried to shift workers to social protection programs, a combination of their own and those of government. Or, the government might have mandated that they provide some form of social protection in exchange for being able to dismiss a worker. Second, fiscal pressures might have induced the state to cut benefits in its own programs or shift responsibilities to enterprises. The changes may have affected the overall availability of social protection benefits as well as the relative roles of enterprises and government.

We have suggested several rationales for social involvement with enterprise benefits. These suggest a classification of benefits in terms of their possible social functions, those that are a form of social protection, commodity benefits, social services, and those that serve no social function. The extent of enterprise involvement in each of these areas may change, and we have suggested a number of reasons to expect changes. We will examine whether actual changes correspond with these expectations. The changes give an insight into the evolving social roles of enterprises.

II. Trends in Compensation

To provide an overview, Table 1 presents the trends in Hungary in overall compensation and its breakdown. The data were assembled by the Hungarian Central Statistical Office from the combination of "balance sheet reports" submitted by enterprises and information from government on its employees. The coverage is thus all employees. Data are presented for 1987 to 1992 to facilitate comparisons with subsequent data, but care is needed for the period before 1989. Following the introduction of an income tax, wages were increased in 1987 and 1988. The apparent increase in real wages for 1988 reflects only this one-time compensatory policy and not a trend.

Table 1a shows that from 1989 when the transition began, there was a sharp drop of 23% in the real wage bill because of rapid inflation. However, overall non-wage compensation went up during this period by 36%, offsetting some of the decline in real wages. The net decline in total compensation was thus only 17%. Table 1b breaks down the change in the real wage bill into the change in employment and the change in real wages per worker. It turns out that employment fell substantially during this period, declining by 13% between 1989 and 1992. Thus, much of the decline in the real wage bill reflects the shedding of workers. For an individual who remained employed, the decline in the real wage was only 12%. Moreover, the increase in non-wage compensation per worker was larger, 56%. Thus, the decline in total compensation per worker was only 5%.

Table 1a. Structure of labor costs, enterprise and government employees (in billions of 1987 forints).

	1987	1988	1989	1990	1991	1992	Change (In %) 1987-1992	Change (In %) 1989-1992
Wages	301.80	439.21	434.60	415.52	357.24	333.31	10%	-23%
Benefits in cash	3.90	2.77	1.70	1.38	1.02	2.52	–35%	48%
Benefits in kind	10.70	8.05	6.22	5.17	4.55	3.80	–64%	–39%
Other wage-like inc.								
From government	–	–	5.70	4.59	4.59	8.16		43%
From enterprises	–	–	36.93	49.84	52.82	54.29		47%
Total, other wage-like	55.00	50.64	42.62	54.43	57.41	62.45	14%	47%
Total, non-wage	69.60	61.46	50.54	60.98	62.99	68.78	– 1%	36%
Total compensation	371.40	500.67	485.14	476.50	420.23	402.09	8%	–17%

Table 1b. Real labor costs per worker (in 1987 forints per worker).

Active earners (000)	5,589	5,548	5,505	5,472	5,304	4,796	–14%	–13%
Wages	53,999	79,166	78,947	75,937	67,354	69,495	29%	–12%
Benefits in cash	698	499	309	252	192	526	–25%	70%
Benefits in kind	1,914	1,451	1,129	944	858	793	–59%	–30%
Other wage-like inc.	9,841	9,127	7,743	9,947	10,825	13,021	32%	68%
Total, non-wage	12,453	11,078	9,181	11,143	11,875	14,340	15%	56%
Total compensation	66,452	90,244	88,128	87,081	79,230	83,835	26%	–5%

Table 1c. Labor costs as percents of total compensation.

Wages	81%	88%	90%	87%	85%	83%
Benefits in cash	1%	1%	0%	0%	0%	1%
Benefits in kind	3%	2%	1%	1%	1%	1%
Other wage-like inc.						
From government			1%	1%	1%	2%
From enterprises			8%	10%	13%	14%
Total, other wage-like	15%	10%	9%	11%	14%	16%
Total, non-wage	19%	12%	10%	13%	15%	17%
Total compensation	100%	100%	100%	100%	100%	100%

Sources: Compensation data: "National Accounts, Hungary 1991." Hungary Central Statistical Office, Budapest, 1993. Employment data: "Statistical Yearboook of Hungary." Hungarian Central Statistical Office, Budapest, 1993.

It is risky to draw conclusions on the market offer curve of employers without holding other variables constant. Although we are unable to do so, our numbers are at least suggestive about the adjustment process. The disequilibrium was addressed mainly by the shedding of workers. There was only a small downward shift in enterprise iso-profit curves and in the market offer curve as suggested by the 5% fall in total compensation. Along the market offer curve, there was a shift from wages toward benefits. One of the limitations of this argument is that the increased non-wage benefits included some that went to support the workers who were shed; compensation per retained worker probably did go down more than indicated here, although the table does not have a breakdown of benefits between shed and retained workers.

The percentage breakdown of total compensation is shown in Table 1c. Wages as a percent of compensation declined from 90% in 1989 to 83% in 1992 as the non-wage component accounts for a larger share. Table 1a also shows that non-wage compensation was

not a monolithic whole. It divides non-wage compensation into three parts. Cash benefits include items such as sick pay or leave and scholarships. Benefits in kind include creches, kindergartens, sports, medical care, and recreation facilities. Benefits not in these categories are called "other wage-like income." This classification is not too informative, but it does show the sharply divergent patterns in specific benefits. Separate data for government and enterprise workers are available in the "other wage-like" category, but not for cash or in-kind benefits. Given these categories, cash and other wage-like benefits increased nearly 50% after 1989, and benefits in-kind declined by nearly 40%.

The increase in non-wage compensation raises questions about both the level and change in compensation in various enterprise types. Fajth and Lakatos provide evidence on the level of benefits by enterprise size.[5] They find that in 1992, fringe benefits were actually a slightly larger percent of total compensation in small than in large enterprises. The difference, however, was largely in benefits that do not serve a social function. Even if small enterprises do not provide more benefits of a social nature, they also do not appear to provide fewer than do large enterprises. The data do not support the idea that non-wage benefits are confined to large enterprises. There is clearly a need for more research on differences in benefits across enterprises of various types.

The structure of labor costs in Hungary can be compared to that in European Community countries because the Hungarian Central Statistical Office in 1992 conducted an enterprise-based survey of the cost of labor, following closely the Eurostat survey carried out be the European Community. However, Eurostat data are available only for firms in manufacturing for 1988. Table 2 shows the structure of labor costs for firms with 20 or more workers in manufacturing for four EC countries in 1988 and for Hungary in 1992. Table 2 is thus more limited in coverage than Table 1 in that it excludes workers in general government, community and personal services, agriculture, the military, unpaid family members and enterprises of less than 20 persons, covering somewhat less than 70% of active earners. It also classifies costs differently, following the EC convention of distinguishing direct remuneration, compulsory or statutory benefits, and benefits that are customarily or voluntarily provided by enterprises.

Table 2 shows that total direct remuneration in Hungary is a substantially lower fraction of total compensation than in all the EC countries. However, statutory costs are substantially higher in Hungary. These include enterprise contributions to public social insurance programs. Combining these, Hungary is only a little lower. On the other hand, Hungary is the highest in terms of customary benefits. In this category, Germany and the U.K. are lowest, while France is slightly behind Hungary. Customary benefits include some which serve only business purposes and others which may serve a social function as well. To get a rough estimate of the breakdown, we assume as strictly business expenses items such as honorariums or payments to member of the boards of directors of firms, travel expenses when at work, grants to cover the expenses for celebrating parties on festive occasions, and payments for performing special task. The remaining customary expenditures we label as "social." By this admittedly arbitrary standard, French enterprises offer the most social benefits, Hungary a little less, and Germany and the U.K. the least.

The customary benefits in Table 2 are probably close to the total non-wage compensation in Table 1, although we lack information on the specific components in Table 1. One discrepancy is that sick pay or leave is included as a cash benefit in Table 1, but is a form of direct compensation in Table 2. Another source of difference is that Table 1 covers all workers and Table 2 those in manufacturing enterprises with more than 20 employees. The figures in the two tables are close, but not identical as might be expected,

Table 2. The structure of labor costs for manual and non-manual workers in firms of 20+ employees in manufacturing; 1988 for EC countries and 1992 for Hungary (percent of total labor costs)

Country	Germany	France	Holland	U.K.	Hungary
Earnings	56.3	52.2	55.1	73.1	45.0
Bonuses	9.1	6.5	7.7	1.4	7.1
Days not worked	11.5	9.7	10.9	11.4	4.7
Total, direct remuneration	76.9	68.4	73.6	85.9	56.8
Statutory cost	16.5	19.2	15.8	7.3	29.0
Total, direct & statutory	93.4	87.6	89.4	93.2	85.8
Customary expenditures	6.5	12.0	10.6	6.8	14.2
Social	4.3	8.5	7.1	4.2	7.3
Other	2.2	3.5	3.5	2.6	6.9*

Source: Labor Costs 1988, Vol. 1, Principle Results pp. 164-165. Euro-Stat 1992, and Labor Cost Survey 1992, Hungarian Central Statistical Office.

* These include customary expenditures for travel, payment for special tasks in-kind, honorariums, vocational training, jubilee gratuities, payment for persons like members of the board who are not on the normal payroll, and other.

given these discrepancies. Concerning the days not worked, Table 2 shows that Hungary ranks lowest among the countries in the table. In the U.K., Germany, and most recently Holland and Hungary, the first days of sick leave are paid by the enterprise. In Hungary, the enterprise obligation has recently been raised from 3 to 10 days, but it is as high as 6 weeks in Germany.

In view of the differences in coverage between Tables 1 and 2, Table 3 presents a comparison of benefits between manufacturing and all industries for 1992. This table shows a number of specific benefits which are included in customary expenditures. We chose ones which might be considered to have social functions. They are expressed as percents of total customary expenditures.

Table 3. Enterprise social benefits: all industries and manufacturing, 1992 (expenditures as percents of customary expenditures).

Type Of Social Benefit	All Industries*	Manufacturing
Cost of welfare services	19.7	18.6
Grants to credit unions	0.8	0.5
Contributions to disability	0.4	0.3
Contribution to early retirement	4.9	7.3
Severance pay	8.0	11.5
Sickness benefits	4.6	5.2
Cost and reimbursements of fares for going to work	6.2	7.0
Contribution to private insurance	0.8	0.7
Totally customary exp. as % of total compensation	14.1	14.2

* Excludes general government, agricultural, small enterprise.

We found limited data on the changes in specific benefits over time which are presented in Table 4a. The data for 1987 were collected by the Ministry of Finance from the enterprise "balance sheet" reports as well as from the accounting reports of cooperatives and public institutions. The data for 1992 are based on estimates made by experts drawing on sources such as preliminary tax information, banks, and social security reports.[6] The data source for Table 4 has classified non-wage benefits into two categories, "social wages in kind" and "social wages in cash." Both categories, however, include benefits that serve only business purposes with no clear social function. We tried to identify such business benefits, denoted by an asterisk and placed at the bottom of each category. We distinguish them from the other benefits which might have a social function and which we call "enterprise social benefits" in each category. The total in each category we call the "social wage," following Hungarian usage. All of these categories are in some degree arbitrary, but they help illustrate some of the differences among benefits.

Total customary expenditures are about the same percent of total compensation in both manufacturing and industry as a whole. This suggests that differences in coverage should not be the source of major differences between Tables 1 and 2. On the other hand, there are differences in specific benefits. The biggest differences are in early retirement and severance pay. This probably reflects a greater willingness by enterprises in manufacturing to rely on exit strategies than other enterprises. Tables 1 and 3 both suggest the importance of examining specific benefits since they may have diverging patterns over time or across industries.

The nominal data for 1992 seem to show substantial increases in most categories, but this was a period of rapid inflation, the consumer price index for 1992 being 2.89 times its 1987 value. When all values are expressed in 1987 prices, it is clear that many of the items have declined in real value, sometimes substantially, while others have gone up. Total real enterprise social benefits *in kind* went down by 16%. In contrast, total enterprise social benefits *in cash* went up by 19%. This left the combined total of enterprise social benefits of both kinds up slightly by 3%. In other words, the total of social benefits originating in enterprises was fairly stable, but there was a large adjustment in the composition of benefits away from benefits in kind and toward cash benefits. If we had relied on the official categories involving the "social wage," this result would have been partly obscured. The combined social wage is fairly stable, down by only 3%; the social wage in kind is down by 15%, similar to the enterprise social benefits in kind; but the social wage in cash barely grew in contrast to the enterprise social benefit.

The finding of stability in overall benefits is probably a result of the time period. In Table 1 also there was little change in total non-wage compensation between 1987 and 1992 even though there was a big increase between 1989 and 1992. Unfortunately, the detailed breakdown of benefits is available only for 1987 and 1992. The important point, however, is that data on non-wage compensation as an aggregate does not reveal the divergent trends in specific benefits.

Looking at the detailed benefits, there are several items such as food, clothing, and rent which are subsidized both in kind and in cash. While the real cash subsidies for these went up substantially, the in-kind subsidies either went down, or in the case of uniforms, rose much less. It seems that rather than give up benefits during this period of reform, enterprises have shifted toward cash and away from in-kind delivery.

Table 4a. Social wages in cash and in kind (in millions of forints).

	1987 Current Ft (1987 Prices)	1992 Current Ft (1992 Prices)	Real Ft (1987 Prices)	Percent Change (1987 Prices)
Social wage in cash				
Sick pay	2,450	600	208	-92%
Sick leave	–	10,000	3,460	na
Early retirement, disability	–	3,500	1,211	na
Social aid	970	750	260	-73%
Travel disbursement	9,000	21,000	7,266	-19%
Rent compensation	800	4,000	1,384	73%
Canteen bonuses, cash	1,500	6,000	2,076	38%
Clothing	300	1,900	657	119%
Grants for needy	430	650	225	-48%
Earning supplement, disabled	–	400	138	na
Severance pay	–	4,500	1,557	na
Subtotal: Enterprise social benefits in cash	15,450	53,300	18,443	19%
*Wages paid for holidays	28,000	70,000	24,221	-13%
*Private car compensation	250	1,200	415	66%
*Payments for foundations	–	6,000	2,076	na
Total: Social wage in cash	43,700	130,500	45,156	3%
Social wage in kind				
Nursery	320	480	166	-48%
Kindergarten	400	630	218	-46%
Recreation	2,900	4,800	1,661	-43%
Culture	850	1,300	450	-47%
Sport	1,500	2,400	830	-45%
Social care	720	1,300	450	-38%
Medical care	300	500	173	-42%
Subsidized housing loans	200	3,000	1,038	419%
Subsidized rent	1,500	2,500	865	-42%
Uniforms	1,500	4,500	1,557	4%
Free canteen bonuses	2,800	8,000	2,768	-1%
Private insurance premiums	–	2,000	692	na
Subtotal: Enterprise social benefits in kind	12,990	31,410	10,869	-16%
*Training	700	1,100	381	-46%
*Company cars	–	4,000	1,384	na
*Free shares	–	3,000	1,038	na
*Bonuses	8,000	14,000	4,844	-39%
Total: Social wage in kind	21,690	53,510	18,516	-15%
Combined totals				
Enterprise social benefits	28,440	84,710	29,311	3%
Enterprise social wage	65,390	184,010	63,671	-3%

Table 4b. Employer and public contributions (in millions of current forints).

Social wage and social income				
	1987		1992	
	Forints	Percent	Forints	Percent
Cash				
Enterprise				
Social benefits	15,450	8%	53,300	8%
Social wage	43,700	22%	130,500	19%
Public	158,900	78%	549,500	81%
Total	202,600	100%	680,000	100%
In kind				
Enterprise				
Social benefits	12,990	10%	31,410	8%
Social wage	21,690	17%	53,510	14%
Public	102,310	83%	341,090	86%
Total	124,000	100%	394,600	100%
Combined				
Enterprise				
Social benefits	28,440	9%	84,710	8%
Social wage	65,390	20%	184,010	17%
Public	261,210	80%	890,590	83%
Total	326,600	100%	1,074,600	100%

Social benefits and social income				
Cash				
Enterprise				
Social benefits	15,450	9%	53,300	9%
Public	158,900	91%	549,500	91%
Total	174,350	100%	602,800	100%
In kind				
Enterprise				
Social benefits	12,990	11%	31,410	8%
Public	102,310	89%	341,090	92%
Total	115,300	100%	372,500	100%
Combined				
Enterprise				
Social benefits	28,440	10%	84,710	9%
Public	261,210	90%	890,590	91%
Total	289,650	100%	975,300	100%

The balance sheet data are accompanied by estimates of public spending, termed "social income," both in cash and in kind, although there is no breakdown on the public side. These figures can give an estimate of the share of enterprise social benefits in total social spending, shown in Table 4b. The top of the table presents the calculations using the entire social wage as the enterprise contribution. The bottom uses only the enterprise contribution to social benefits which in principle is more appropriate, but in practice is limited by our ability to distinguish benefits which have a social function. Thus, our discussion should be considered only suggestive, based as it is on our particular designation of which benefits are social. Enterprise social benefits contribute close to 10 percent of the total. For cash benefits, enterprise and public shares remain constant in 1987 and 1992, indicating that the public benefits increased at the same rate as those of the enterprise. For in-kind benefits, the public share rose: public spending in kind increased 15% in real terms while enterprise spending declined. While the public sector was substituting for enterprise in-kind benefits, the data do not show which public benefits went up. Because of the decline in enterprise benefits in kind, the overall enterprise contribution went down slightly from 10% to 9%. Total public spending increased by 18% in real terms. While the majority of social spending comes from government, enterprises play a role which, although limited, may not negligible.

III. Evidence on the Determinants of Benefit Changes

We suggested above several kinds of variables which might be expected to affect benefits including their cost to enterprises, the needs or tastes of workers, the pressure to shed workers, and the array of government policies which affect benefits. Unfortunately, we lack the quantitative data on costs and needs that would permit a full evaluation of the determinants of change. Instead, we first examine government policies which have played a major role in stimulating changes. Second, we focus on the hypothesis of increased variability across enterprises, suggesting the cost, need, and policy factors that might account for the observed pattern.

A. Government Policy and Benefits

Even in the socialist era, Hungarian benefit policy did not fit the simple model of the government mandating uniform standards for all enterprises. Before 1968, planners did determine benefits in considerable detail. After 1968, however, the planners specified a minimum welfare fund and enterprises had more discretion over how it was used.[7] It is likely that enterprises took advantage of this to get around restrictions on wages: wages apparently were more tightly monitored than benefits which became the easier channel for increasing total compensation. While these employer practices may have increased the variability of benefit packages across enterprises, there were also elements of a social philosophy relating to benefits which might have encouraged a degree of uniformity.

Even in socialist countries, the link between general philosophy and practical policy may be sufficiently weak that there can be variations in the implementation of policy. Nevertheless, there were some prevailing attitudes concerning policy which may have influenced the direction of benefit practices. There was, for example, a view that benefits — both in general and specific types — enhanced worker productivity. In other words, there was a theory of motivation relating to benefits, and planned economies tried to encourage managers to follow the same theories. There was also a view that certain social functions were the responsibility of enterprises and that enterprises should play a central role in the

development of a socialist society. These ideological views could have helped shape conventions concerning the appropriate design of benefit policy and so could have contributed to uniform practices.

We lack the evidence to distinguish the forces toward uniformity and those toward diversity in their effects on enterprise benefit policies in the period before 1989. However, the transition beginning in 1989 brought another major change as the obligation by enterprises to maintain welfare funds was eliminated altogether. Moreover, the ideological underpinnings which might have contributed to the old conventions for benefit policy may have weakened. There is thus reason to believe that enterprises may have acquired more freedom to design their own policies. on the other hand, they are not totally free. A series of new government regulations has influenced their actions. There are some explicit new mandates. However, in many cases, the new policies offer incentives which allow enterprises an element of choice. Consider some examples of government policies.

Mandates

- The state itself contributes toward payments for sickness, but also mandates enterprise contributions. In 1985-1991 the enterprise was required to cover sick pay for the first 3 days of sickness. Since 1992, the government has been shifting the burden of payments toward enterprises by requiring sick leave for the first 10 days of sickness.
- The state has mandated that 85% of the cost of travel to work be financed by the enterprise for workers who commute to work from outside of the city limits.

Incentives

- There is an incentive for food benefits in the form of a provision for tax exemption for food amounting to 1200 forints per month per worker. Enterprises take advantage of the exemption in more than one way. Many firms opt to provide their employees with food coupons which permit them to purchase food items in the chain store, Julius Meinl. Other enterprises invest in a highly subsidized canteen. Some do both.
- In the case of clothing there is an allowance which is tax exempt, but there is also a subsidy for uniforms. The government has sought to reduce the spending on uniforms by imposing more stringent standards for the items to be allowed as work clothing, but enforcement has been difficult. Itemized reimbursement invoices have been required, but as Table 4 shows, real spending on uniform subsidies continued to rise slightly.
- In 1991 there was a general household energy subsidy for electricity, gas, and central heating, but it was phased out.

The government has also been involved with the issue of shedding workers. On the one hand, there is an interest in encouraging enterprises to become more efficient even if this means shedding workers. On the other hand, dismissed workers may be eligible for unemployment insurance, increasing the burden on that system. To discourage dismissals, the government in 1991 mandated severance payments. An enterprise is required to pay from 3 months to 1 year of severance pay, depending on years of service of the dismissed worker. As an alternative to outright dismissal, the government has also encouraged the use of early retirement. When enterprise reorganization requires a substantial reduction in employment, workers with 3 years to go before retirement can be offered early retirement benefits. The benefits are paid out of the public pension system, but there is a cost to the enterprise. It must pay 50% of the early retirement pension and the state the rest. The state thus has been

imposing costs on enterprises for dismissing workers while also opening new choices concerning forms of dismissal.

B. The Extent of Benefits and Their Variations

Changes in government policy and in enterprise costs have tended to affect all enterprises. However, the hedonic wage model of benefits suggests that different enterprises will respond differently to the same stimuli. One of the important features of the new regulatory environment is that in many areas enterprises have more choices. Government policy relies more on incentives than on outright mandates although mandates do remain. Thus, we expect that the transition period should be characterized by more variations in benefits across enterprises. Unfortunately, our detailed benefit data in Table 4 show only aggregate expenditures for each benefit type. From this data, we cannot distinguish changes that result because all enterprises change their benefits in the same proportion from those that result because some enterprises change while others do not. Instead, we rely on our case studies for evidence on specific benefits. We look at the response of benefits to a changing environment, the factors producing the change, and whether the responses are common across enterprises or whether they vary.

Food. Food benefits are one of the largest benefit areas. At Ikarus, a bus manufacturing company, nearly 40% of benefits were for food. Food benefits include both coupons and company canteens. From Table 4 it is clear that the combination of these two for enterprises as a whole is a large benefit, but on average not as large as at Ikarus. It is also clear from Table 4 that in the aggregate there has been a substantial shift to increased use of food coupons and a small real decline in canteens. On the other hand, the case studies show that the shift has not been uniform across enterprises.

Given that enterprises now have a degree of choice between providing food benefits through canteens, subsidized coupons, or not at all, it is not *a priori* clear which option an enterprise will choose. Because of the tax subsidy, it is cheaper for an enterprise to give workers a forint of food coupons rather than wages, up to the limit of the subsidy. The choice between coupons and canteens should also depend on the relative cost, but this is more difficult to estimate. There are not only the direct costs of the food in both cases, but also indirect costs. For example, the availability of restaurants near the enterprise may affect the time required for lunch which is a cost to it. Enterprises will choose the form of food benefit based on its full cost. The hedonic wage theory suggests that enterprises will also choose benefit packages in order to appeal to the desired kind of worker. Three examples illustrate the variety of responses among enterprises.

Ikarus allows workers choice. Individuals can apparently choose the subsidized canteen or individual food coupons. In contrast, Ganz-Ansaldo enterprise, a producer of heavy electrical equipment, relies exclusively on its canteen. Ganz is the Hungarian partner of an Italian enterprise for which high quality food has symbolic and instrumental consequences. It tried to eliminate as many social benefits as it could. The canteen, however, was not only kept, but improved. A three course, high quality meal is available for only 40 forints. The tax exempt value of the food coupon is absorbed in the cost of the canteen and the firm adds a subsidy. This means that the food coupon option is not available as a direct benefit to workers.

The third example is Dunaferr, a state-owned enterprise producing steel sheets and metal products such as radiators. It is a large factory outside of Budapest employing about 30,000 workers. It provides a canteen, but seeks to limit its use through an indirect form of

rationing. Only half the workers receive it due to shift work. The meal is only served at lunch, and the transportation schedule of returning workers to their homes by the company bus is not integrated with the timing of the mid-day meal. As these illustrations show there is variation across enterprises relating not only to the cost of the benefits, but also to the kinds of workers the enterprise seeks to attract.

Kindergartens. There has been a sharp reduction in enterprise real spending on kindergartens and creches as seen in Table 4. A UNICEF report concluded that the reduction "... is fueled by financial difficulties facing most firms and by privatization of the sector which strengthens the profit motive and tends to reduce the average size of firms. Terminations of government regulations requiring enterprises to provide these services, and easing of public expectations have also contributed to their decline. In addition, with increases in short term supply of labor, enterprises no longer find it necessary to supply child care facilities to attract workers ..."[8] The argument about financial difficulties is not convincing because other benefits are increasing nonetheless. However, changes in government regulations and declining need seem to be relevant determinants of the changes.

According to the hedonic wage model, workers' preferences are important determinants of benefits. When workers no longer need a benefit — when it no longer has value to them — the benefit loses its value to enterprises also who want to use benefits to attract and retain workers. Government policy is relevant to the extent it allows enterprises to reduce the provision of the benefit.

In Hungary, there has been a clear trend toward an aging labor force, and there has been a general decline in fertility. The crude birth rate per 1,000 population has declined from 140 in 1980 to 110 for the first 6 months of 1993. The decline in enterprise provision of kindergartens and nurseries has been proportionately greater. In 1991, enterprises accounted for only 4% of all the children enrolled in kindergartens and nurseries, and by 1993 only 1%[9] These numbers can be compared to the figures in 1970 when 10.3% of children attending pre-school education received the service from the employer. On the one hand, this shows that even in the socialist period, the work place was not the primary vehicle for the provision of child care. On the other hand, enterprises have responded to the demographic change by cutting back sharply their involvement in this area. There has been a pronounced shift from enterprises to regional governments and more recently to nonprofits as sponsors of child care.

Benefits requiring physical infrastructure. A number of the traditional benefits of Hungarian enterprises required substantial physical investment including housing, recreation homes, and health care facilities, as well as the kindergartens and canteens already discussed. There is a general movement away from benefits relying on enterprise infrastructure investments, although the details differ by benefit and by enterprise. It is plausible to argue that the costs of providing benefits based on enterprise infrastructure investments are higher than alternative forms of delivery, although we do not have direct evidence to confirm this. However, the observed pattern of enterprises seeking to cut back such investments is consistent with the idea that these are perceived as high cost ventures which profit-driven enterprises can no longer afford. Consider the adjustments enterprises have made with respect to infrastructure in several areas.

Housing. It used to be common for enterprises to build and then own dormitories for its workers. The dormitories accommodated primarily relatively unskilled workers who came in from the countryside to work. In the case of Ikarus, most of these workers were let go and the infrastructure sold off or put to other use. This happens to be a case with substantial infrastructure, but it is not clear that the cost of the investment was the decisive factor in the

change. The infrastructure was originally needed to attract and retain the rural workers. But since the enterprise shedding its unskilled commuters, the dormitories were not needed.

Interestingly, enterprises did develop new housing subsidies which seem to be targeted to keeping selected kinds of workers. Enterprises have subsidized middle level workers by reimbursing their rental costs in the community where the company was located. There is also a program to reimburse housing loans, but the funds involved are generally limited and appear to be targeted at upper level workers. Enterprises seem to have avoided direct infrastructure investments in the case of these new types of housing benefits.

Recreation homes. There is a long tradition of subsidizing holiday homes for weekends and for summer and winter vacations. Almost all firms have these vacation homes and many have tried with varying degrees of success to get rid of some or all of them. There was an effort to replace this form of benefit with vacation subsidies. This is an area where the infrastructure cost may have been a dominant reason for the transition, but even here there were also considerations on how to use this benefit to attract and retain workers.

The move away from infrastructure in this area has been limited by practical considerations. The initial effort of enterprises was to sell their vacation homes. But this crowded the market with surplus hotels and a very limited number of buyers. This lowered their price and made the option of selling off the property less attractive. This led to a search for new alternatives. Contracting was one option, where the contractor would charge market level rents. Another was to retain the property, but use it for other purposes such as training centers. These are apparently adjustments that may eventually lead to the sale of the property if market conditions permit.

As enterprises took away this traditional subsidy, it seems that many compensated workers by introducing cash vacation subsidies. This part of the story is consistent with the idea that cash subsidies are a cheaper way of providing vacation benefits than company hotels, although this depends, of course, on the level of subsidy provided. There is, however, an indication that the old form of subsidy was targeted rather narrowly. The TÁRKI data show that only 6 to 13 percent of workers nationally made use of the facilities. We found similar levels in our case study at Dunafeer. The cash subsidy may be targeted at a different group and in this way more effectively help the enterprise retain and attract the kinds of workers it wants. Additional data and tests would be needed to distinguish the roles of infrastructure costs and appeal to workers as factors explaining the movement away from enterprise-run hotels toward vacation subsidies.

Health Clinics. Enterprises have frequently sponsored health clinics. There is a clear rationale for having a facility to deal with accidents or illnesses that originate at work, in other words with the health externalities of the work environment. Once the facility is in place, it may have a capacity greater than needed just to cover occupational injuries. Indeed, some enterprise clinics provided a broad range of general health services. However, it was also common for enterprise clinics to be run as a kind of joint venture with the local government. The enterprise created the clinic and paid for the facilities and equipment. But the local government paid the wages of the doctors, nurses and medical personnel. A study using the Hungarian household panel data reports that enterprise health benefits have been the second most common benefit after meals. It found that 34% to 38% of public and mixed sector workers receive it respectively compared to 20% in the completely private sector.[10]

In the new market oriented environment, a tendency may be emerging toward buying health services rather than providing them directly. In 1993 new legislation was passed making it possible to purchase individual health care. If individual purchases become

widespread, enterprises may decide to divest their health facilities, selling perhaps to private health providers or perhaps for different functions altogether. The national data from TÁRKI show that between 20–38% of workers receive health services through the enterprise. However, the data from Ikarus show that only 4% of its welfare costs go for health compared to 12% for recreation houses.

There is some evidence that firms are providing workers with health insurance benefits, which supplements the health care covered by the public scheme. The future role of the enterprise in this area will depend on the nature of what is covered in the public insurance scheme. The less generous the public coverage, the more intense the pressure for enterprises to cover the cost. Moreover, as with food and clothing coupons, tax forgiveness will be an important determinant of the role of the enterprise.

Finally, local government may play a role in the evolution of benefits. If a company owns a health clinic (or sports stadium or swimming pool), the value of the asset is in part determined by whether the new owner can get a variance to use the property as it wants. This puts the local government in a strategic bargaining position to deal with the enterprise facility. For example, the government may impose restrictions on the use of the facility. We were told of a hotel in Budapest that could not privatize because the swimming pool had been open to the community and the potential new owners wanted the facility to be limited to the hotel's clientele. Historically, enterprises served their own clientele in Budapest, whereas in Berlin they were more likely to serve the general community, but there are exceptions. There have been other cases where local governments have invested in facilities that enterprises wanted to divest.

Benefits for terminated workers. There has been growth in benefits such as severance pay and early retirement. The determinants of these will be discussed together with their social functions in the next section.

IV. Social Functions Of Non-Wage Compensation

In this section, we examine benefits in terms of several possible social rationales. In particular, we look for benefits that are a form of social protection, those that involve the delivery of social services, commodity benefits, and benefits that do not fit any of these categories. The tendencies associated with these groupings offer insights into the concerns driving policy. We found data on the change in particular benefits between 1989 and 1992 for one large company, GE-Tungsram, shown in Table 5. It gives a one case illustration of developments in these categories.

A. Social Protection

During the socialist period, social protection in Hungary was the responsibility primarily of government. Enterprises made social insurance contributions to the government, but the government was responsible for delivering most benefits. Since 1989, there has been rapid growth in enterprise benefits that could be considered social protection. The new benefits, however, are used largely in conjunction with the shedding of workers. Social protection is generally defined as protecting people against the risk of income loss, and that is what these benefits are doing. Early retirement and severance pay have been rapidly growing enterprise benefits, and these are used primarily for workers who are being dismissed. As discussed earlier, severance pay has been mandated by government, and the government allows pensions to be paid three years early when workers are shed in a reorganization, but the

Table 5. GE-Tungsram compensation (in percents of total compensation).

	1989	1993
Wages	65.38%	57.18%
Social security contributions	29.10%	30.03%
Benefits		
1. Social protection		
Early retirement	—	4.35%
Severance pay	—	2.61%
2. Social & health services		
Child care	0.32%	0.12%
Medical care	0.57%	0.22%
Social support	0.27%	0.14%
3. Commodity subsidies		
Meal allowance	1.23%	2.10%
Housing support	0.02%	0.16%
Vacation support	0.09%	0.03%
4. Miscellaneous		
Scholarship support	0.11%	0.01%
Retraining costs	—	0.02%
Sick pay	0.30%	0.73%
Legal service	0.04%	0.04%
Other	2.57%	2.26%
Total Benefits	5.52%	12.79%
Total Compensation	100.00%	100.00%

enterprise must pay half the cost. This is an area where government policy initiated the benefits, but enterprise decisions determine the extent of their use. The government has in effect set a price for dismissing workers in terms of benefits that must be given. Each enterprise then can evaluate the trade-off between the costs of keeping workers and the costs of dismissing them, where different enterprises may make different choices.

In the case of GE-Tungsram, these two benefits in 1993 amounted to nearly 7% of total compensation and over half of benefits, although they did not even exist in 1989. It is noteworthy that Tungsram does not consider these two items to be "social benefits" although it does report their amounts. Indeed, there are other benefits which it also does not consider social, such as supplementary pensions and supplementary death and disability benefits, which it does not even report explicitly as part of its compensation costs. We have data from Ikarus for just one year, but the only one of these enterprise social protection costs reported is pensions. There apparently are not standard procedures for identifying social components of benefits, and social protection benefits provided by enterprises are often overlooked altogether.

The high severance pay and early retirement benefits are reflections of the shedding of workers during the period of transition and are thus likely to be temporary. However, other developments may produce long-run changes in enterprise social protection benefits. In December 1993 the Hungarian Parliament adopted an Act of Mutual Supplementary Pension and Health Insurance. The preamble of the bill provides a statement of the general purpose:

> "It has become increasingly clear over the course of the past decade that the State budget is unable to cover the ever growing expenditures of the uniform compulsory

social security system ... It has become clear that in the future only that system will be viable, which takes into account the principle of self-reliance ... financed by fees from the membership and by other contribution supplements...the goal is the reform of the social security system ... by reducing the excessive role undertaken by the state."

While the state has initiated increases in the social protection benefits to assist workers in the case of dismissal, the reforms in the case of regular pensions and health care do not seem to aim at an increase. Rather, the goal apparently is to shift responsibilities from itself to enterprises.

B. Social Services

In contrast to social protection benefits where certain enterprise responsibilities have been increasing, enterprise involvement in social services has been declining. Although health insurance is often considered a form of social protection, we classified it here along with social services, because the focus is on the delivery of health services. Insurance is social protection to the extent that it meets unexpectedly high medical expenses. Hungarian enterprise clinics began with a focus on work-related services. Even when they have expanded coverage, the government has shared in the expenses. Thus, we treat this sector as if the government meets the unexpected insurance needs, while the enterprise provides ongoing services.

In the case of Tungsram, all three of the items we list under social services have declined. Similarly, in Table 4 nursery, kindergarten, social care, and medical care went down substantially. The child care has already been discussed: with the decline in fertility, enterprises no longer find it necessary to appeal to workers by offering this benefit. However, the enterprise reductions are greater than the overall decline in the level of these services. Rather, the enterprise reductions are part of a shift in responsibilities to other sectors — local governments and nonprofit organizations. This is true of health clinics as well. Enterprises are selling their clinics or sharing them with local governments. There is a shift away from enterprise health clinics, but not necessarily away from health altogether because other entities are substituting for enterprises.

With the 1993 legislation to encourage health insurance, the role of enterprises in health insurance, which is a social protection benefit, may eventually increase. But the change that has already taken place is in the area of enterprise-provided health services, and these have declined.

C. Commodity Benefits

Certain commodity benefits have been big growth areas. table 4 showed big increases in spending on food and clothing benefits, at least in the form of cash rather than in kind. The Tungsram case shows a big increase for food, but there is not a separate entry for clothing. A study using the Hungarian Household Panel data reports that support for meals is the most common benefit. About 68-69% of public and mixed sector workers receive it and 53% of those in the private sector.[11]

The social significance of commodity benefits is not completely clear. We suggested that they may have been intended to assist workers facing market shortages. More recently, they may have served as protection against inflation. But they are large not simply because of

enterprise business policy. The state has been actively involved in setting regulations and designing tax incentives to encourage their use. Whatever the underlying social rationale, they are a part — and a relatively large one — of enterprise social benefits.

D. Miscellaneous Benefits

There are many benefits that do not fit neatly in any of the above categories. Sick pay in its original conception is social protection in that it provides income support in the case of income losses from short-term sickness. However, it is often used by workers simply as support for days not worked. In view of the extent of the moral hazard problem, we did not classify it as social protection. On the other hand, the government has been actively involved in financing this benefit. The increase in enterprise sick pay expenses reflects the government policy of transferring more of the responsibility for this benefit to enterprises by requiring them to pay for 10 days instead of the previous 3 days of sickness.

Other miscellaneous benefits in the Tungsram case declined, as have many for enterprises as a whole.

E. Distributional Impacts

One area where benefits may have social consequences relates to their distribution. We did not examine the distribution of benefits, but a recent study by Newbery produced a surprising finding. His focus was actually on prices and their decontrol rather than benefits. He asked "whether the price changes that have taken place since the tax reforms of 1988 have had an adverse effect on the distribution of purchasing power. The rather surprising answer is that changes in relative prices appear to have been uncorrelated with distributional characteristics. This is consistent with the view that the original set of subsidies and taxes were poorly targeted on distributional grounds, combined with the observation...that there is little variation in distributional characteristics that would allow indirect taxes and subsidies much purchase on distribution."[12] There is some evidence to suggest that as the subsidies were removed, they were partially replaced by tax exempt social benefits in enterprise. Enterprise benefits may have offset the decline in the subsidies and this might account for part of the reason that Newbery does not detect distributional effects.

V. Conclusion

One of the major developments accompanying the economic transition in Hungary has been a sharp drop in the real wage bill amounting to 23% between 1989 and 1992. Much of this reduction was accomplished by shedding workers during this period, 13% of the work force. For those workers who remained employed, the decline in the real wage per worker was 12%. At the same time, however, real non wage compensation increased by 36%, or on a per worker basis, by 56%. The increase in real non-wage compensation per worker has offset much of the decline in wages, resulting in a net decline in real compensation per worker of only 5%. Of course, some of the benefits did go to terminated workers; thus the decline in compensation per retained worker may have been somewhat greater.

Although non-wage compensation as a whole has increased dramatically, not all benefits have moved in tandem. There have been large increases in some benefits — mainly those more cash-like — and large reductions in others — mainly those given in kind. However, the classification of benefits is irregular, with different benefits included in different data sources. Since there are such divergent trends across benefits, very different pictures can

emerge concerning trends, depending on how benefits are measured. To understand better what these trends mean, we asked first what factors have determined the changes in benefits, and second what social functions enterprise benefits might have served.

In accord with the hedonic wage model, our case studies suggest that enterprise benefits have responded both to the cost of benefits relative to wages and to the preferences of workers concerning benefits and wages. On the cost side, government has been active in reducing the costs of benefits for commodities such as food and clothing by exempting a basic cash subsidy from taxes. Enterprises have responded, and in varying ways, designing benefit packages to attract and retain the kinds of workers that seem most suitable to them. There has also been a clear tendency for enterprises to cut back on benefits requiring substantial infrastructure investment which could reflect cost concerns — an attempt by enterprises to find less expensive ways to deliver benefits. However, the infrastructure cutbacks could also result from changes in worker needs and preferences, and cost considerations are likely to interact with the needs and preferences in affecting benefits. This study gives only a preliminary indication of the determinants of change because it is based on the qualitative evidence from our case studies. More definitive results depend on collecting quantitative data across firms and performing more rigorous tests.

Our other major question concerns the social functions of enterprise benefits. During the period of transition, a realignment of social responsibilities has begun between enterprises and other sectors. Social protection, for example, had previously been provided primarily by government. But as enterprises began shedding workers, government raised the cost of doing so by requiring the payment of severance pay. It also gave enterprises an incentive to use early retirement, but again enterprises would have to share some of the cost. While enterprise social protection benefits have grown so far mainly in relation to the shedding of workers, new legislation is aimed at increasing enterprise involvement in supplementary pensions and health insurance. The aim apparently is an eventual shift in responsibilities away from government and to enterprises. There has already been a shift in costs from government to enterprises in the case of sick leave.

In contrast, enterprise involvement in social services has been diminishing. Enterprises have cut back on child care and health clinics. While enterprises have cut their services, other sectors such as local governments and an emerging nonprofit sector have had an increasing role. Outside of social services, there have been similar enterprise cuts in cultural and recreation activities.

One large and growing area for enterprise benefits has been commodity subsidies such as food and clothing. While enterprises decide on these based on their business policy, the government has been actively involved through the tax incentives it offers. The rationale for considering these as social benefits may not be clear, but the involvement of government makes them a part of social policy.

Our study suggests that the period of transition has brought substantial change to the area of enterprise benefits, and has also initiated a realignment of social responsibilities between enterprises and other sectors of the economy. However, our results are preliminary and need quantitative verification. Our results also suggest guidelines for further investigation. Data on benefits should be disaggregated as finely as possible. This is necessary because different kinds of benefits move in different directions. It is also essential in order to detect the variations across enterprises in benefit policy. Clear standards are needed for classifying benefits. The current designation of "social" is applied inconsistently. Narrower categories indicating social functions can give interesting insights as we have

shown. Costs of benefits need to be measured carefully and worker needs or preferences somehow identified. Finally, the behavior of government needs to be carefully traced and, to the extent that it is endogenous, to be modeled. Future research along these lines should improve our understanding about the Hungarian benefit system during the period of transition.

Notes

1. Three of the case studies were carried out alone and three by Dr. Irén Stuber, Ph.D. in economics, retired associate professor of the Semmelweiss Medical University and author of several articles on enterprise level social policy in Hungary.
2. See, for example, Ehrenberg, Ronald G., and Smith, Robert S., *Modern Labor Economics*, Harper Collins, New York NY, 1994.
3. New tests and a review of previous work appear in Edward Montgomery, Kathryn Shaw, and Mary Ellen Benedict, "Pensions and Wages: An Hedonic Price Theory Approach," *International Economic Review*, 33, February 1992, pp. 111-128.
4. István Kameniczky, "The Improvement of the Organization and Incentives for Cooperative Labor: The Case of the USSR and Hungarian Industry," Moscow, 1984. Unpublished Ph.D. dissertation.
5. Gáspár Fajth and Judit Lakatos, "Fringe Benefits in Transition in Hungary," Paper presented at the workshop Social Protection and the Enterprise in Transition Economies at the Institute for Advanced Studies, Vienna, 25-26 March 1994.
6. The data for 1992 were compiled by Gáspár Fajth and Gyula Fekete from unpublished sources. The estimates are preliminary, but nevertheless interesting.
7. Gáspár Fajth and Judit Lakatos, "Fringe Benefits in Transition in Hungary," Paper presented at the workshop Social Protection and the Enterprise in Transition Economies at the Institute for Advanced Studies, Vienna, 25-26 March 1994.
8. Public Policy and Social Conditions, Regional Monitoring Report No 1., Nov. 1993, UNICEF, Florence, Italy, p. 70.
9. Ibid., P. 58.
10. J. Köllő, "The Report of the Hungarian Household Panel, First Wave: Living In Budapest," TÁRKI, Budapest, 1993, Mimeo.
11. *Ibid.*
12. David M. Newbery, "The Distributional Impact of Tax and Price Changes in Hungary," Feb 9, 1994, Mimeo p. 7–8.